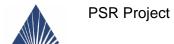


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#### SECTION V - ADMINISTRATIVE AND TECHNICAL REQUIREMENTS

#### A. INTRODUCTION

**PSR Project** 

This section addresses the administrative and technical requirements for the Corporate Online Member Employer Transactions (COMET) - Pension System Resumption (PSR) Project (PSR Project) Alternative Procurement Request for Proposal (RFP). A number of these requirements mandates that particular material or information (e.g., forms, charts, matrices, and plans) be included in the Qualified Business Partner's (QBP's) submittal; these requirements are numbered in each section as 'Proposal Item XX." Large volume or browser compatible documentation samples may be submitted in CD ROM format. The CD must be referenced in the Proposal Item response and included within the applicable volume. The Proposal Item requirements in the QBP's Final Proposal must be organized so that these items can be easily found by the California Public Employees' Retirement System (CalPERS) Evaluation Team (Evaluation Team).

It is the QBP's responsibility to ensure that the Evaluation Team is able to locate all response descriptions and exhibits for each requirement in this RFP by completing Attachment V.1, Administrative Requirements Response Matrix specifying the location of this information in Volume I.

#### B. ADMINISTRATIVE - BUSINESS QUALIFICATIONS

#### 1. Cover Letter

A cover letter, which will be considered an integral part of the Proposal, must be signed by an individual who is authorized to bind the QBP contractually. The cover letter must state that the individual is so authorized and must identify the title or position that the individual holds in the QBP's firm. An unsigned cover letter shall cause the Final Proposal to be rejected. The letter must contain the following:

- (a) A statement to the effect that the Proposal is a firm and irrevocable offer good for 180 days.
- (b) A statement expressing the QBP's willingness to perform the services as described in this RFP.
- (c) A statement expressing the QBP's availability of staff and other required resources for performing all services and providing all deliverables as described in this RFP.
- (d) A statement expressing that all personnel assigned to the PSR Project, including those working off-site or off-shore, will submit a signed Confidentiality Statement.

Proposal Item 1

QBP's Proposal must contain a signed Cover Letter as specified above.

#### 2. Proposal/Proposer Certification Sheet

#### Proposal Item 2

QBPs must complete and return the Proposal/Proposer Certification Sheet, Attachment V.2. This certification must be signed by an individual who is authorized to bind the QBP contractually.

#### 3. <u>Taxpayer and Shareholder Protection Act Declaration</u>

#### Proposal Item 3

All QBPs must complete and return the California Taxpayer and Shareholder Protection Act Declaration, Attachment V.3. This declaration must be signed by an individual who is authorized to make the declaration on behalf of the QBP. The Act prohibits a State agency from entering into any contract with an expatriate corporation or its subsidiaries, with specified exceptions.

#### 4. Disabled Veteran Business Enterprise Contract Participation Goal

In accordance with Public Contract Code section 10115, et. seq., and California Military and Veterans Code section 999, et. seq., every QBP must comply with the Disabled Veteran Business Enterprise (DVBE) contract participation requirements. Attachment V.4 contains information and instructions with which each QBP must comply in order to achieve the participation goal or documents its good faith effort. Final determination of a QBP's DVBE participation and/or good faith effort shall be at the sole discretion of CalPERS.

#### Proposal Item 4

All QBPs must complete and return Attachment V.4, Exhibit 1, and/or Attachment V.4, Exhibit 2, and the required documentation required in Attachment V.4 with their Proposal. Failure to do so may result in rejection of the Proposal.

#### 5. Preference Programs

The State established the following preference programs to encourage participation in State contracting by various segments of the business community and to stimulate business and employment in geographic areas determined to be economically distressed.

#### (a) Small Business Preference

Information regarding this preference program may be obtained at <a href="https://www.pd.dgs.ca.gov/smbus/default.htm">www.pd.dgs.ca.gov/smbus/default.htm</a>. The Small Business preference will be applied to those QBPs declaring their Small Business status on the Proposal/Proposer Certification Sheet, Attachment V.2.



#### (b) Target Area Contract Preference Act

Information regarding this preference program may be obtained at <a href="https://www.pd.dgs.ca.gov/disputes/default.htm">www.pd.dgs.ca.gov/disputes/default.htm</a>. QBPs seeking to obtain a Target Area Contract Preference Act (TACPA) preference must complete and submit the Target Area Contract Preference Act Preference Request, STD. 830, with their Proposal. This form is available to download at the link provided above.

#### (c) Enterprise Zone Act

Information regarding this preference program may be obtained at <a href="https://www.pd.dgs.ca.gov/disputes/default.htm">www.pd.dgs.ca.gov/disputes/default.htm</a>. QBPs seeking to obtain an Enterprise Zone Act (EZA) preference must complete and submit the Enterprise Zone Act Preference Request, STD. 831, with their Proposal. This form is available to download at the link provided above.

#### (d) Local Agency Military Base Recovery Area Act

Information regarding this preference program may be obtained at <a href="https://www.pd.dgs.ca.gov/disputes/default.htm">www.pd.dgs.ca.gov/disputes/default.htm</a>. QBPs seeking to obtain a Local Agency Military Base Recovery Area Act (LAMBRA) preference must complete and submit the Local Agency Military Base Recovery Area Act Preference Request, STD. 832, with their Proposal. This form is available to download at the link provided above.

#### Proposal Item 5

QBPs seeking to claim any of the above-listed preferences must submit the appropriate forms in response to this Proposal Item. QBPs not claiming any of the four preferences may enter "Not Applicable" in response to this Proposal Item.

#### 6. Prime Contractor Responsibility

A QBP submitting a Final Proposal that results in the award of a contract will be considered the "Prime Contractor." The Prime Contractor must accept full responsibility for coordinating, controlling, and delivering all aspects of the contract, including support or activities to be performed by any sub and/or secondary contractors.

The Prime Contractor will be the sole point of contact with CalPERS relative to contract performance. If this performance involves the use of one or more program products proprietary to another firm, the Prime Contractor will be responsible for acquiring a proper license for CalPERS use of such program products. If any Proposal includes equipment or services provided by other firms, the Prime Contractor is responsible for the delivery, and maintenance of the entire business solution for the term specified in the contract.

In all contractual matters, CalPERS will consider the Prime Contractor to be the sole point of contact. There will be no assignment of responsibility to a third party without prior written CalPERS approval.

#### Proposal Item 6

QBP's Proposal must contain a statement accepting full Prime Contractor responsibility for coordinating, controlling, and delivering all aspects of the contract and any subcontractors on their team.

#### 7. Identification of Subcontractors

#### Proposal Item 7

QBP's Proposal must contain a description of the Prime Contractor's intent to use subcontractors in fulfillment of the project requirements. The Proposal must identify the following:

- (i) The firms and/or individuals proposed as subcontractors and staff names:
- (ii) The role and/or activities to be performed by the subcontractors or their personnel;
- (iii) Resumes of all Team Lead level and higher (Key Persons) staff proposed must be included in response to Proposal Item 38; and,
- (iv) Affirmative statement that the proposed subcontractors will be trained in the Prime Contractor's methodologies, standards, policies, and procedures and that they agree to use and follow these for the life of the project.

#### Proposal Item 8

QBP's Proposal must contain a description of their procedures for managing subcontractors involved in the project along with their reporting mechanisms. The procedures must indicate how the subcontractors are to be compensated; e.g., time and materials, fixed price, hourly, or salary. **Do not include the specific costs in response here**, but explain the compensation arrangement in terms of calculations to be performed and schedule of payments (i.e., payment bi-weekly, monthly, only when CalPERS pays, etc.).

#### 8. Prime and Subcontractor's Financial Statements

#### Proposal Item 9

QBP's Proposal must contain audited financial statements or other acceptable documentation (as determined by CalPERS) for the QBP and for each subcontractor providing more than ten percent (10%) of the services associated with this RFP. Acceptable financial documentation may include, but is not limited to, the following:

- (i) Financial Statement or Annual Report for the prior three (3) years indicating an average annual gross revenue of \$50M (QBP only); and,
- (ii) Statement of income and related earnings (subcontractors).

The QBP must disclose any past, pending, or expected arbitrations, mediations, proceedings, judgments, litigation, governmental or regulatory actions; or other potential financial reversals, which might materially affect the viability or stability of the QBP's organization or its ability to provide services to CalPERS. QBPs must also include an assessment of the potential financial impact of any pending litigation, estimate of impact, and when, if known, the litigation will be settled;

If the information submitted by the QBP, or available from other sources, is insufficient to satisfy the Evaluation Team as to the QBP's contractual and financial responsibility, CalPERS may request additional information from other sources or reject the Proposal. CalPERS determination of the QBP's responsibility, for the purpose of this RFP, shall be final.

Note: Due to the size and sensitive nature of the financial data, only three (3) copies of this information are required. See special submission instructions for Proposal Item 9 in Section VIII Proposal Format. Any of the financial information identified by the QBP as confidential, shall be treated as such by CalPERS.

#### 9. <u>Project Reference</u>

The purpose of the project reference is to provide CalPERS the ability to verify claims made in the proposal by the QBP and to assess the functionality of the product(s)/solution proposed. The descriptions of these projects must be detailed and comprehensive enough to permit CalPERS to assess the similarity of those projects to the work anticipated in the execution of the contract resulting from this procurement. The descriptions must contain performance measurements used during and after the course of those projects to determine the efficiency and effectiveness of the product(s)/solution. In today's environment, this reference information is essential to assess the potential for risk.

During the evaluation and selection process, CalPERS will contact the specified "references" and may contact any other customers or references, which may become known to CalPERS through any source. If the QBP's solution is selected, CalPERS may change the specific risk mitigation contract provisions for the QBP based on the solution itself. These will be discussed with the QBP and will be finalized during the finalization of the contract Riders.

Proposal Item 10

QBP must submit at least one completed Project Reference Form (Attachment V5) for the proposed product(s)/solution.

#### 10. Insurance

The QBP must maintain in force (as required by State law) a valid Workers' Compensation Insurance Policy for all employees engaged in the performance of the contract and agree to furnish CalPERS satisfactory evidence thereof at the time of Final Proposal submission and at any time CalPERS may so request.

Proposal Item 11

QBP's Proposal must provide evidence of a valid Workers' Compensation Insurance Policy for all employees proposed in the performance of this contract.

#### 11. QBP Behavior and Data/Personnel Security

The QBP and any of their subcontractors engaged in providing services to CalPERS pertaining to the PSR Project that require contact with confidential CalPERS information or access to confidential systems, will be required to exercise security precautions for such data that is made available and must accept full legal responsibility for the protection of this confidential information. This includes all financial, statistical, personal, technical, and/or other data and information relating to CalPERS operations. Under no circumstances shall the QBP use, publish, sell, or otherwise disclose to any third parties the contents of any records or data submitted for processing.

#### Proposal Item 12

QBP's Proposal must indicate if any PSR Project activities are to be performed off-site or off-shore and, if so, which activities, how they will be managed and coordinated with the PSR Project Team at the CalPERS location, and how protection of CalPERS confidential information will be maintained. If off-site or off-shore activities are proposed, any project staff at the Team Lead level and higher must be onsite at CalPERS. If no work is proposed to be performed off-site or off-shore, "Not Applicable" should be entered in response to this Proposal Item.

#### Proposal Item 13

The QBP must provide one (1) Project Reference Form (Attachment V.5) for a project in which work was performed off-site or off-shore if this is proposed for this PSR project.

The QBP must agree that, if work is proposed to be performed off-site or off-shore, the company must be licensed to do business in California and all Team Lead level and higher staff must be housed at the CalPERS location. At the option of CalPERS, the off-site or off-shore staff must be made available at the CalPERS location on request at the QBP's expense. If no work is proposed to be performed off-site or off-shore, "Not Applicable" should be entered in response to this Proposal Item.

#### C. PROJECT ACTIVITIES AND PLANS

**PSR Project** 

It is CalPERS intent to evaluate the QBP's past level of effort and prior performance as well as their capability to execute certain tasks successfully. Tasks include but are not limited to:

- System preparation (project planning, tracking, and control);
- System requirements specifications and gap analysis;
- System development and testing;
- Data conversion;
- System implementation;
- User training;
- System maintenance;
- System management;
- System operation and support;
- System integration; and,
- System transition.

For this reason, the QBP must provide, as part of the Proposal, evidence in the form of client references of the required capability and experience as specified in this RFP.

In addition, because the proposed solutions will likely differ among QBPs, CalPERS requires the QBP to prepare and submit information about the QBP's Project Plans. Such plans must be submitted along with the QBP's response to the other administrative requirements.

#### 1. Project Management Plans

The QBP Project Management Plan (PMP) will be the controlling document for managing the PSR Project and must include activities for CalPERS staff as well as QBP staff resources. The QBP must use its PMP to define the technical and managerial project functions, activities, tasks, and schedules necessary to satisfy the project requirements. The PMP is intended to define the project and identify

the level of resources required thus providing the "baseline" for the change control process to gauge all future development activities, and for change requests. The PMP will be used to track the achievement of major project milestones and provide the basis for ongoing project communications.

The baseline Initiation Phase PMP must be provided to the CalPERS PSR Project Manager within ten (10) State working days of project start date. The full PMP for the remainder of the project must be provided to the CalPERS Project Manager within ten (10) State working days of acceptance of Milestone 1. The PMP will become binding on both parties when it is approved by CalPERS PSR Project Management. The QBP Project Manager will be responsible for management and execution of the PMP.

This is a fixed-price contract and the base assumption is that there are no change orders. Change orders will only be considered under the terms identified under Exhibit II.4 Rider I Unanticipated Tasks or that are the result of Board mandates, or law or regulation changes.

The QBP will staff and support the PSR Project Office for the implementation. The PMP schedule updates must be made at least weekly. The QBP must plan for these management activities. The QBP Project Manager must provide a documented process for ongoing updates to the PMP.

If the QBP requests planning changes to this document during the project life cycle, they will require written approval from CalPERS PSR Project Manager or their designee. QBPs must be aware that CalPERS will use an industry standard (e.g., Institute of Electrical and Electronics Engineers (IEEE) 1058 - 1998) when reviewing all deliverable documents for acceptance purposes. The QBP will be required to maintain all plans throughout the life of the project to ensure that the plans reflect changes in approach, methodologies, staff, roles, responsibilities, etc.

#### Proposal Item 14

QBP's Proposal must contain a PMP developed according to IEEE Standard 1058 – 1998. The PMP should include any site/building or space requirements for your proposed solution hardware. QBP shall provide a detailed Project Management Methodology description to supplement the PMP. The PMP submitted for Proposal Item 14 may exclude the following artifacts as they are called out in other Proposal Items:

- Staffing Plan;
- Project Schedule;
- Staff Training Plan;
- Schedule Management Plan;
- Reporting Plan;
- Risk Management Plan;
- Configuration Management Plan;
- Quality Assurance Plan; and,

Subcontractor Management Plan.

#### Proposal Item 15

QBP's Proposal must contain a <u>Software Development Plan</u> and <u>Methodology Description</u> to supplement the PMP, which includes, at a minimum, a general description of phases and activities required to ensure complete implementation of the proposed system, which must be developed to the J-Std-016 IEEE standard.

#### Proposal Item 16

The QBP must provide a draft <u>Project Schedule</u> including Work Breakdown Structure using the CalPERS approved version of Primavera IT Project Office or comparable tool. CalPERS will consider project management tools other than Primavera if the QBP can clearly demonstrate that the tool and supporting methodology are comparable to the Primavera toolset and meet CalPERS project management needs, and contains a method for addressing unanticipated tasks.

The QBP must present tasks, start and completion dates, task initiation and completion criteria, relationships and dependencies among tasks, timing, major deliverable milestones, resource allocations (e.g., work products and project deliverables, CalPERS approval points or signoffs), and GANTT chart.

#### Proposal Item 17

The QBP must provide a <u>Schedule Management Plan</u> that describes their approach to schedule management factors including resource updates, tracking of resource activities, earned value reporting, tracking of milestone progress and reporting, critical path monitoring, schedule issues, status reporting based on work breakdown structure, and contingency activities.

#### Proposal Item 18

The QBP must provide a Risk and Issue Management and Mitigation Plan that describes their approach to project risk factors including contractual, schedule slippage, technological, architectural, size, complexity and criticality, personnel acquisition and retention, data conversion issues, customer acceptance risks, report format, information flows, escalation through the Project Executive and the PSR Governance Board if required, and review and audit mechanisms. Refer to the PSR Reference Library for information on the PSR Governance Board. Risks should be categorized by business component or overall risks.

#### Proposal Item 19

The QBP must provide a <u>Quality Assurance Plan and Methodology</u> covering all activities and tools to be used in providing a quality assurance review of all work products

and activities during the project and including standards to be used and measured against which must be developed to the IEEE Standard 730-2002 or CalPERS approved standard. The QBP must indicate the qualifications and certifications of the Quality Assurance staff member they are proposing, which must cross-reference with the QBP staffing in Proposal Items 35, 36, 37, 38, and 39.

#### Proposal Item 20

The QBP must provide a PSR Project Risk Contingency Plan. This Plan would identify the courses of action to be taken by the QBP for any realization of risk that is found to be unacceptable due to impact on costs, schedule, quality or scope of the project. The objective of the Risk Contingency Plan is to establish a documented set of planned alternatives for major concerns for a project of this size and scope. The Plan should address, but not be limited to, the following conditions:

- (i) QBP's failure to deliver fully compliant system components according to schedule;
- (ii) A major operational disruption or failure of the new system immediately following implementation;
- (iii) Loss of Key Persons on the QBP or CalPERS teams;
- (iv) Data conversion problems or failure;
- (v) Disaster before full system implementation;
- (vi) Implemented system does not meet performance thresholds;
- (vii) Failure of CalPERS business testing scenarios to identify all potential software problems; and,
- (viii) Other potential risks identified by the QBP.

#### Proposal Item 21

The QBP must provide a detailed <u>Software Version Control</u> <u>and Configuration Management Plan</u> utilizing their proposed System Development Life Cycle Methodology and tools. Plan must be developed to the IEEE Standard 828-2005 or CalPERS approved standard.

#### Proposal Item 22

The QBP's Proposal must contain a detailed description of the proposed format and tools which would be used to deliver a completed Requirements Traceability Matrix and Gap Analysis as specified in Section II, Rider I.

### Proposal Item 23

**PSR Project** 

The QBP must provide an outline for the PSR Project and a sample from a previous project of the following:

- Concept of Operations;
- General System Design Specifications;
- Detail System Design Specifications; and,
- General System Requirements Specification.

#### Proposal Item 24

The QBP must provide a <u>Transition Plan</u> for how the new PSR solution will be rolled out to CalPERS business users, stakeholders, and external users. For those affected by the PSR Project, this transition must include how the processes will be impacted by the Solution, how the new methods of doing business will be conveyed to the enduser community, and steps that will be taken to assess the CalPERS "workplace readiness" prior to the new PSR solution going into production.

#### 2. Project Tracking, Progress Assessment, and Status Reporting

The QBP Project Manager must track project events and assess progress relative to the project's goals and schedule using the CalPERS automated tool (CalPERS approved version of Primavera IT Project Office) or other CalPERS approved tool the QBP deems necessary to support producing management reports. The QBP must continually assess the degree of completion and level of effort or resources expended for all tasks, work items, events, and milestones identified in the Project Schedule.

The QBP will be required to discuss project progress (actual accomplishments in comparison with Project PMPs and timetables) with CalPERS Project Manager or designee, as CalPERS may request. Each month a formal, written Monthly Project Status Report (MPSR) must be presented to the CalPERS PSR Project Manager. This report must show work accomplished as it pertains to each task in the work breakdown structure, including resources (individuals) assigned and the number of hours used per month. The report must be certified to be accurate by the QBP's Project Manager.

#### Proposal Item 25

QBP must agree to provide a Monthly Project Status Report to the CalPERS PSR Project Manager.

QBP's Project Management must attend the Weekly Status Meeting and provide a written Weekly Status Report.

QBP staff along with CalPERS staff will assist in tracking progress on resolving the risks and issues and advising CalPERS if a delay in resolution will impact the project

schedule. The QBP Project Manager will present the status of all outstanding risks and issues rated "high" or "medium" at the Weekly Status Meetings. Those risks or issues resolved since the last meeting will be reviewed and resolution presented. If the resolution is not satisfactory or agreement cannot be reached, the PSR Project Manager will invoke the escalation process and project governance for a final decision. New risks or issues identified will be assigned a number and logged into CalPERS Risk and CalPERS PSR Project Manager or Issue Database. designee and QBP Project Manager will review the background material developed by the originator of the risk or issue, prioritize, and assign the resolution and research assignment to the appropriate team member. QBP will also report earned value based on baseline Project Schedule.

#### Proposal Item 26

The QBP's Proposal must contain a detailed description of the proposed approach and methodology for the project schedule tracking and progress assessment process including any specific tools to be used in addition to Primavera. The QBP must include samples of work materials and proposed interim deliverables, showing the format and content of those materials.

#### Proposal Item 27

The QBP must provide a Risk and Issue Tracking Database to support the Risk and Issue Management and Mitigation Plan as described in Proposal Item 18 to be used, and kept up to date by QBP Project Manager or designee through the life of the project to record all activities and information about the identified risks or issues, and shall remain with CalPERS after completion of the project.

### 3. <u>Training Plan and Methodology for Training</u>

The QBP must propose a Training Plan required for their proposed solution. CalPERS will provide one (1) training room in Sacramento for proposed solution training. Any training identified by the QBP not proposed to be conducted at the CalPERS Sacramento training facility must include, as part of the cost for training, all travel and State per diem associated with travel to the training site for all CalPERS staff attending (refer to the PSR Reference Library for State per diem rates).

If QBP proposes web-based training, specify the degree to which the training complies with industry standards (e.g., Aviation Industry Computer Based Training Committee, Shareable Content Object Reference Model, etc.).

Training aids, manuals, quick reference guides and other training materials must reflect the solution as implemented and be provided for each student, in hard copy, in the training program. All materials must also be delivered in electronic format. Training materials shall become the property of CalPERS upon completion of the training and may be modified or supplemented as needed. The QBP must allow CalPERS to duplicate all materials and manuals.

A <u>Final Report on Training Effectiveness</u> must be developed by the QBP and submitted following the delivery of training to the PSR Project staff. The QBP must provide a method to assess the effectiveness of the initial training, which identifies strengths and any needs for improvement of the plan to sustain training on an ongoing basis. CalPERS PSR Project Manager or designee must approve the QBP's proposed method of assessing the effectiveness of the initial training. The report is to include an assessment of the training sessions that indicates the extent to which these employees or CalPERS trainers have learned and retained the lessons and are able to apply the training to their jobs. This report is to include a certification and the basis for such certification that all training objectives have been met for each person trained.

QBP must assess the knowledge transfer using proven tools and techniques. If it is found that the provided training has been inadequate to transfer the needed knowledge, remedial action must be identified and implemented with the approval of the CalPERS PSR Project Manager by the QBP at no additional cost.

A document that provides detailed information on the number of estimated staff that will require training is located in the PSR Reference Library.

#### Proposal Item 28

QBP's Proposal must contain a detailed draft <u>Training Plan</u> that will be finalized and approved by CalPERS thirty (30) calendar days prior to commencement of the training program.

#### Proposal Item 29

QBP's Proposal must contain a methodology for assessing training effectiveness. The QBP must deliver a Final Report on Training Effectiveness that provides a comprehensive discussion of the method to assess the initial training effectiveness. This report must also contain a detailed plan of recommended additional training required to address the identified training shortfalls. QBP shall provide one instance of retraining per class per student where training was rated by CalPERS as ineffective. The CalPERS PSR Project Manager or designee must approve the QBP's proposed method of assessing the effectiveness of the initial training.

#### Proposal Item 30

The QBP must describe how support is provided to CalPERS Trainers, how training materials are developed and updated, and the period for which training support will be provided.

### 4. Data Conversion Plan and Methodology

#### Proposal Item 31

**PSR Project** 

The QBP's Proposal must contain a sample Data Conversion Plan from a project of similar size, scope, and complexity, as well as a draft of the PSR Data Conversion Plan (DCP). Refer to Table III.4 Transaction and Data Volumes. The QBP's plan must include the extent of data clean-up of existing CalPERS data in the legacy systems as well as a recommendation of how much detail data to convert, and a conversion strategy of "cut-over" or "phased". Staffing and resources must reflect the strategy employed. QBP will be responsible for the total data conversion and CalPERS will validate the converted data. The detailed DCP must be approved by CalPERS ninety (90) days prior to the commencement of conversion activities. A test data conversion must be performed and all data validated and approved by CalPERS prior to the full conversion occurring.

#### 5. Operations Plan and Methodology

#### Proposal Item 32

QBP's Proposal must contain a sample <u>Operations Plan</u> from a project of similar size, scope, and complexity. The QBP's proposed PMP, submitted in response to Proposal Item 14, must contain the activities and tasks necessary for the development of a complete detailed Operations Plan. The Operations Plan will be developed in collaboration with CalPERS.

#### 6. System Documentation

#### Proposal Item 33

The QBP must provide sample documentation to include, at a minimum, the following:

- (i) System Operations Documentation;
- (ii) System Technical Documentation;
- (iii) System End User's Documentation;
- (iv) Help Desk Documentation;
- (v) System Technical Schematics;
- (vi) System Data Dictionary;
- (vii) As-Built Documentation of All Configuration, Modification, or Programming;
- (viii) System Back-up and Recovery Documentation;
- (ix) Hardware Documentation; and,
- (x) System Maintenance Documentation.



#### 7. Test Plan, Tools, and Methodology

**PSR Project** 

The QBP must provide a draft <u>Test Plan</u>. The actual detailed Test Plan and Test Defect Log must be submitted no later than ninety (90) days prior to the commencement of testing activities. All business and technical requirements in this RFP must be traceable to the Test Plan and the QBP must provide CalPERS with a traceability matrix which will provide a link from each test case back to each of the business and technical requirements in the RFP, System Requirements Specifications, and System Design Specifications for testing purposes. Negative testing scenarios must be included.

With system or application components which have been in productive use, the QBP shall submit certification, in writing, that the product or component has been successfully tested previously (refer to Productive Use Requirements in the Technical Section T-113 and in the Glossary).

The proposed testing must use an industry-accepted standard that must be followed for Test Plan construction. The QBP must use existing CalPERS testing tools unless a compelling reason to use other tools is presented to and approved by CalPERS. Existing testing tools include: Parasoft Jtest, Mercury Test Director, Mercury WinRunner, Mercury LoadRunner, Compuware XPEDITER, Microsoft Web Application Stress Tool, SDT Unified TestPro, Jakarta Ant, Quest TOAD, and Rational Rose Suite. The final detailed Test Plan will become the basis for verifying that the system operates as documented and intended. The Test Plan must be in sufficient detail to provide a baseline for internal control, detailed operations, and data audit.

If the QBP proposes to modify existing software to meet the requirements of CalPERS, the Test Plan must include "Out-of-the-Box" testing by CalPERS to validate that the base system performs as expected in its unmodified form on CalPERS equipment. This will establish a baseline for system set-up, configuration, and modifications. It will be the decision of the CalPERS PSR Project Manager and the PSR Testing Coordinator when the testing has been successfully completed.

#### Proposal Item 34

QBP's Proposal must contain a sample <u>Test Plan and Test Defect Log</u> from a project of similar size, scope, and complexity as well as a draft <u>Test Plan Outline</u> for this project describing all the testing activities proposed for both QBP and CalPERS staff.

#### D. THE PSR PROJECT MANAGEMENT ROLE

CalPERS will provide the following:

1. Full-time CaIPERS PSR Project Manager and two Deputy Project Managers to oversee and to assist the QBP Project Manager.



- 2. PSR Project Office staff to establish, monitor, and control the policies and processes related to program and project management. The PSR Project Office will coordinate with the QBP for planning and executing, schedule/resource/budget and earned value reviews, contract administration, status reporting, quality assurance, risk and issue management, document control, and configuration management.
- 3. An Independent Project Oversight Consultant (IPOC) will be retained to support the CalPERS PSR Project Manager in terms of monitoring CalPERS and the QBP's performance, responsibilities, and deliverables. The IPOC may perform the following activities on behalf of CalPERS:
  - (a) Independent verification and validation of deliverables including verifying test results, staffing, selected QBP activity in accordance with the Proposal and plan, and schedule and progress report accuracy;
  - (b) Validate certifications by selected QBP, validation of cost results, and validation of claims submitted to the PSR Project;
  - (c) Support Risk and Issue management including facilitating timely issue resolution; and,
  - (d) Validate requirements traceability.

#### E. PROJECT STAFFING AND ORGANIZATION

The QBP's proposed staffing and organization must be of sufficient depth to complete all contractual obligations and services throughout this contract. The skill levels of proposed QBP staff must be consistent with the QBP's proposed solution. Resumes for proposed QBP staff must reflect experience with a pension system or projects that qualify the individual for a project of this size, scope, and complexity. Qualifying experience on projects must utilize the software products being proposed and must reflect the abilities for the proposed task assignments of the QBP proposed staff.

#### 1. QBP Responsibilities and Staffing Levels

The QBP must propose specific individuals to fill all QBP staffing roles at the Team Lead level and higher. Team Lead positions are those that are responsible for the work of other staff performing a function that is critical to the QBP's Proposal. The QBP is expected to propose the staff levels and roles that best support its solution for the contract duration, and <u>CalPERS</u> requires a commitment by the QBP to maintain continuity of staffing.

Once committed to the project, all proposed staff are expected to remain for the duration of the project in that role. The staffing chart must match the Cost Table VII.3.

QBP staff at the Team Lead level and higher must possess the experience required by CalPERS and have worked on those projects that have been used as

customer references. A firm project reference where no staff from the reference project have been proposed for the CalPERS PSR Project brings little experience to the project and can nullify that reference.

However, CalPERS recognizes that a resignation or other events may cause QBP project team members at the Team Lead level and higher to be unavailable. CalPERS Project Management reserves the right to approve or deny all QBP proposed replacement project team members. The proposed replacement staff must have the same or higher-level skills and experience as the staff person leaving the project.

#### Proposal Item 35

All QBPs must complete and return Attachment V.6, QBP Staffing Plan. Attachment V.6 must list all proposed QBP resources assigned to this project. The resources must be grouped according to categories (Project Management, Functional Management, Technical Management, etc.).

The QBP must identify the specific role to which each of the resources will be assigned, the pay classification for staff serving in that role, and the number of full-time equivalent (FTE) resources serving in that role per month. For roles at the Team Lead level and higher, identify the individual(s) who are proposed to fill that role and include their full resumes (Proposal Item 38). Identify the fiscal years and FTEs for the entire project duration, from start up through CalPERS acceptance and full implementation.

For space planning purposes, CalPERS needs to know the actual number of QBP staff (not FTEs) that will be on-site during the project. Include at the end of each table the total number of QBP staff that will be on-site each month. Add lines as needed to the table.

#### Proposal Item 36

All QBPs must complete and return Attachment V.7, QBP Staffing Plan Reference Form. Attachment V.7 must be completed for all proposed QBP resources assigned to this project at the Team Lead level and higher.

#### Proposal Item 37

All QBPs must complete and return Attachment V.8, QBP Team Summary Skills Matrix listing all PSR Project roles, individuals' name (for roles at the Team Lead level and higher for both the Prime and subcontractors), education, the specific experience and skills for this role, and the duties and responsibilities of this role. The experience, skills, and duties must be specific to that role, not generic descriptions applicable to a pay classification. For example, the role of Team Lead over Benefit Payments may have different required experience and duties than Team Lead over Interfaces. The QBP staff resumes

submitted in response to Proposal Item 38 must reflect the information contained on this summary chart.

#### Proposal Item 38

For roles below the level of Team Lead, the QBP must provide a list of skills and experience required. QBPs must provide complete resumes for all individuals at the Team Lead level and higher that have been proposed for this project. Resumes, at a minimum, must include the following: individual educational achievements (institution name, degree and certification, and year graduated) employment experience for the past five (5) years indicating the organization, title (and role), job duties, and months and years of employment. For projects within the past five years, resumes submitted must include a name and telephone number of a personal reference contact for the project.

After Final Proposal submission, CalPERS must be assured that the QBP selected has all of the resources required to perform successfully under the contract. This includes, but is not limited to, personnel in the numbers and with the skills proposed, equipment of appropriate type and in sufficient quantity, and experience in similar endeavors. Those individuals proposed in project roles that have had their resumes submitted in the Proposal must be available; the QBP may not place other staff in these roles after contract award without permission of CalPERS.

#### Proposal Item 39

QBPs must complete and return Attachment V.9, Team Experience Matrix. List all roles at the Team Lead level and higher and the names of the proposed individuals who will fill those roles. Using the individual's resume and proposed role as a basis, summarize the experience each individual has in the following areas:

- Total years in the fields of pension systems, and/or management information systems regardless of employer;
- (ii) Years serving in the same role as proposed, regardless of employer or software application;
- (iii) Years working on public sector or pension system projects, regardless of employer or software application;
- (iv) Years experience with the pension application software proposed;

- Identify the largest client for whom the individual has implemented a pension system, the number of years on that project, and the application software implemented;
- (vi) Total years as a project manager planning projects, executing and controlling projects, and closing projects;
- (vii) Years as a training professional, regardless of employer, years developing training courses and years teaching courses;
- (viii) Years as a pension system professional regardless of employer, years as a manager and years as an analyst;
- Years as a pension professional, regardless of employer, years as a manager and years as an analyst;
- (x) Years as an information technology professional developing the application software proposed, implementing the software, and maintaining the software as a manager and/or as an analyst;
- (xi) Years testing application software conducting system tests and acceptance tests as a manager and/or an analyst;
- (xii) Years planning and developing system architecture as a software architect, hardware architect, and connectivity architect as a manager and/or an analyst;
- (xiii) Years administering security administering Operation System and Database security, application security, and network security as a manager and/or analyst;
- (xiv) Years converting data from legacy systems divided into years as a manager and years as an analyst;
- (xv) Years performing as a quality service manager or experience with quality control and monitoring;
- (xvi) Client reference firm name;
- (xvii) Client contact name;

(xviii) Client contact phone number; and,

(xix) Client project name.

**Note**: QBPs should be aware that during the Final Proposal Evaluation, QBP proposed management and Team Lead and higher references may be validated. CalPERS strongly urges the QBP to bring their proposed project management staff to attend the confidential discussions.

#### 2. QBP Recommended CalPERS Responsibilities, Skill Sets, and Staffing Levels

CalPERS intends to provide business knowledge and technical expertise to facilitate the performance of the project; however, it is the QBP's responsibility to provide and implement the total solution.

CalPERS staff will review deliverables, confirm functional and technical requirements, participate in design sessions, validate data conversion results, and perform user acceptance testing; they will not develop programs or project deliverables, and should not be considered replacements for QBP resources.

Proposal Item 40 QBPs must complete and return Attachment V.10, for CalPERS Full-Time Equivalent Personnel indicating what CalPERS staff should be allocated to achieve the best possible solution by identifying the specific skill sets required and when they will be needed. The skills and duties must be specific to each role. Exhibit V.1 provides CalPERS proposed staffing and should be used for QBP planning purposes only. QBPs can modify their staffing plans accordingly, and QBPs must describe the impact of the CalPERS staffing information on the QBP Staffing Plan.

#### 3. **PSR Project Organizational Chart**

#### Proposal Item 41

QBP's Proposal must contain an organizational chart by project phase showing each QBP-proposed individual's role, their relative reporting position in the project, all subcontractors, their roles and reporting positions in the project, and the proposed relationships to CalPERS personnel involved in the project for each phase of the project.



#### F. PROJECT WORK STANDARDS

**PSR Project** 

The following are work standards for the project and must be adhered to:

- 1. The QBP will use Microsoft Office 2000 or the CalPERS approved version installed at CalPERS in the preparation of all project correspondence and deliverables.
- 2. The QBP will comply with CalPERS Information Security Policies and Practices. Any exceptions to the established practices must be agreed to in writing by CalPERS.
- 3. The QBP Project Manager will meet with CalPERS PSR Project Manager or designee and other appropriate resources to review an outline of a Deliverable Expectations Document (DED) for each project deliverable in advance of its preparation. This process will establish expectations on all sides regarding the content, number of copies, required format, and acceptance criteria for the deliverables and facilitate the review process. If the QBP has its own preferred form for a DED, they may submit it for consideration by CalPERS.
- 4. The QBP will maintain the Project Schedule in the CalPERS approved version of Primavera IT Project Office (formerly known as TeamPlay) or an automated tool accepted in writing by CalPERS.
- 5. The QBP will manage all project documentation in automated tools acceptable to CalPERS.

#### Proposal Item 42

QBP's Proposal must include a statement agreeing to comply with the PSR Project Work Standards as stated in this RFP. Approval by CalPERS PSR Project Manager or designee must be granted prior to any change to these Work Standards.

#### G. TECHNICAL REQUIREMENTS

The purpose of this section is to present the technical requirements that are to be addressed by the proposed solution. Technical Requirements are mandatory baseline requirements, which, at a minimum, must be met by the QBP's proposed solution. Technical requirements include application, security, platform, and data-related requirements and are listed below in Section V.G.1.

QBPs must respond to each of the Technical Requirements using Attachment V.12.

A variety of reference materials are available to the QBP including the following:

 <u>Exhibit IV.1 CalPERS Conceptual Target Architecture Vision</u> - This exhibit represents conceptual Enterprise Technology Architecture (ETA) which defines the overall form and function of the Information Technology (IT) systems across an enterprise.



# <u>Exhibit IV.2 CalPERS Target Architecture Principles</u> – This exhibit provides a framework of principles, recommended practices, guidelines, policies, standards, and products, which direct the design, analysis, construction, deployment and management of IT and systems across the enterprise.

• <u>PSR Reference Library</u> – The reference library contains the details for the current existing pension system at CalPERS.

#### 1. Technical Requirements - Application

The Technical Application Requirements cover the mandatory requirements of the proposed solution's application architecture.

	the proposed soldions application architecture.
Req. #	Technical Application Requirements
T-1	To the extent and in the manner determined to be applicable by CalPERS, the proposed solution shall be required to comply with the Health Insurance Portability and Accountability Act (HIPAA) of 1996 in cases where State law is not more stringent. The Contractor shall ensure compliance with the act and the following finalized Code of Federal Regulations (CFR):
	<ul> <li>Standards for Electronic Transactions. (45 CFR Parts 160 and 162);</li> <li>Standards for Privacy of Individually Identifiable Health Information (45 CFR Parts 160 and 164);</li> <li>Standards for Security (45 CFR Part 160,162 and 164); and,</li> <li>Standard Unique Employer Identifier (45 CFR Part 160 and 162).</li> </ul>
	The Contractor shall ensure that CalPERS is in compliance with the following proposed rules when they are finalized, including National Standard Health Care Provider Identifier (45 CFR Part 142).
T-2	The proposed solution must provide external user interfaces that conform to applicable Americans with Disabilities Act (ADA) Level 1 regulations regarding access for individuals with disabilities as noted in 28 CFR Sec. 36.303 and 28 CFR Sec. 35.160. The proposed solution must meet lowest level of government endorsed disability compliance level.
T-3	The proposed solution must provide an intuitive graphical user interface using screen navigation via pointing device or keyboard at user option.
T-4	The proposed solution must provide a GUI development toolset to maintain the proposed solution's user interfaces.
T-5	The proposed solution must provide integration of voice, data, digital images, sound, and video information.
T-6	The proposed solution must provide the ability for data entry errors to be identified with descriptive and instructional messages in non-technical terms.
T-7	The proposed solution must provide the ability to send and receive information electronically.

Req. #	Technical Application Requirements
T-8	The proposed solution must provide the ability to allow users to print screen information including application name and screen or function name.
T-9	The proposed solution must provide a single entry sign-on.
T-10	The proposed solution must provide consistent menus and screens with a common look and feel throughout the application.
T-11	The proposed solution must display a screen title and unique screen identifier on every screen.
T-12	The proposed solution must provide a standard processing indicator that will enable the user to visually assess that the application is processing and not frozen.
T-13	The proposed solution shall provide comprehensive context-sensitive help that can be accessed both from the function in question and independently from a menu. The help shall also:
	Provide a table of contents, multiple index levels, and full text search;
	<ul> <li>Provide cross reference and online access to regulations, policy and procedures by issue;</li> </ul>
	Provide online access to the User's Manual; and,
	<ul> <li>Have correct spelling and grammar in United States English, and shall be consistent in font, color, format, text case, and style.</li> </ul>
T-14	The proposed solution must provide the ability to enter and modify online documentation with no programming changes to the application.
T-15	The proposed solution must provide the ability to create modules that encapsulate business rules for consistent application of CalPERS laws and regulations.
T-16	The proposed solution must allow business rule changes with minimal programming changes.
T-17	The proposed solution must provide tools that manage solution module versions, relationships and migration/environment statuses.
T-18	The proposed solution must have the ability to allow support staff to determine if a batch process has run to end of job.
T-19	The proposed solution must provide the ability to capture and report relationships between the proposed solution and non-solution systems.
T-20	The proposed solution must allow for batch processes to be restarted from the point of failure.
T-21	The proposed solution must have the ability to log and self diagnose system errors.

Req. #	Technical Application Requirements
T-22	The proposed solution must have the ability to automatically notify support staff that specified events have occurred, such as program exceptions, connectivity failures, etc.
T-23	The proposed solution must allow for enhancements to be made without needing to recompile the entire system.
T-24	The proposed solution must provide a toolset to manage all application components of the proposed solution.
T-25	The proposed solution must support the ability to limit application access during production deployments to a user definable list of evaluators.
T-26	The proposed solution must provide the ability to broadcast messages to a definable set of users.
T-27	The proposed solution must allow for the remote execution and monitoring of batch processes.
T-28	The proposed solution must permit online transactions while batch processing is occurring.
T-29	The proposed solution must provide the ability to process a CalPERS daily workload in a day.
T-30	The proposed solution must not adversely affect the performance of non-solution (legacy) CalPERS systems that will continue to exist after the implementation of the proposed solution.
T-31	The proposed solution must integrate with CalPERS current telephony systems for telephony service processing functionality.
T-32	The proposed solution must provide document service interfaces to allow the creation, modification, tracking of documents, and document lifecycles.
T-33	The proposed solution must provide the ability to use flexible standards such as ODBC or JDBC to allow for data manipulation using common languages and tools.
T-34	The core components of the pension system must be J2EE compliant.
T-35	The proposed solution's reusable services must be accessible throughout the CalPERS heterogeneous network.
T-36	The proposed solution must provide auditing service capabilities with respect to security, performance, and availability requirements.
T-37	The proposed solution must have the native ability to present or supply business data as XML documents.
T-38	The proposed solution must support multiple document types and styles using XML and XSL.

Req.#	Technical Application Requirements
T-39	The proposed solution must have the native ability to render data as PDF, HTML, and XML.
T-40	The proposed solution must have the ability to support device independence at the presentation layer.
T-41	The proposed solution must use messaging when transporting information across application, service, or process boundaries.
T-42	The proposed solution must have the ability to support the Simple Object Access Protocol (SOAP) for reusable services.
T-43	The proposed solution must separate the data, rules for managing the data, and the methods of accessing the data from the application.
T-44	The proposed solution must provide reusable services for accessing application data.
T-45	The proposed solution must provide on-demand application performance monitoring.
T-46	The proposed solution must provide application trace monitoring with the capability to turn the feature on and off as required without restarting the application.
T-47	Ninety five percent (95%) of end-user online display screen and record update response times shall not exceed three (3) seconds and none shall exceed ten (10) seconds.
T-48	The proposed solution must provide the ability to perform data sharing with Microsoft Office (MS) tools, including the ability to extract data to MS Excel or from other MS Office applications.



#### 2. <u>Technical Requirements - Security</u>

**PSR Project** 

Technical Security Requirements describe the hformation Technology security requirements that the proposed solution will adhere to and will be measured against.

Req.#	Technical Security Requirements
T-49	The proposed solution must provide or support an identification process where data is transferred, presented, and/or collected to establish a claimed identity of a system entity.
T-50	The proposed solution must provide or support the use of mechanisms to validate the claimed identity of the system entity requesting access.
T-51	The proposed solution must provide or support mechanisms that enforce an authentication strength that is commensurate with the related risk level and classification of the data, applications, and/or systems being accessed by the system entity.
T-52	The proposed solution must provide or support the use of a process that validates the identity of the system entity requesting access.
T-53	The proposed solution must provide or support protection mechanisms that ensure identity and authentication data are kept private and secure from unauthorized disclosure, access, or destruction.
T-54	The proposed solution must provide or support protection mechanisms to ensure that privacy controls are deployed and maintained for identity and authentication data so that the data will always be kept private and secure from disclosure, access, or destruction by unauthorized system entities.
T-55	The proposed solution must provide or support the use of mechanisms that ensure against false denial of participation by a system entity while in the process of presenting credentials to access processes, data, resources, and systems.
T-56	The proposed solution must provide or support mechanisms that prevent access to processes, data, resources, and systems by unauthorized system entities.
T-57	The proposed solution must provide or support access control mechanisms that permit access to data by only authorized entities.
T-58	The proposed solution must provide or support access control mechanisms that permit access to applications by only authorized entities.
T-59	The proposed solution must provide or support access control mechanisms that permit access to resources and systems to only authorized entities.
T-60	The proposed solution must provide or support privilege management mechanisms and capabilities.

Req. #	Technical Security Requirements
T-61	The proposed solution must provide or support access control mechanisms to confine a system entity to only those activities required to perform specified business and/or technical functions.
T-62	The proposed solution must provide or support the ability to define and grant access rights depending upon the system entity's role and/or relationship with the organization or system.
T-63	The proposed solution must provide or support the establishment and maintenance of controls that define privileges for system entities in accordance with their relationship to the organization.
T-64	The proposed solution must provide or support the establishment and maintenance of relationships and hierarchical structures between organizational entities.
T-65	The proposed solution must provide or support the establishment and maintenance of relationships between system entities and organizations.
T-66	The proposed solution must provide or support the protection of processes, data, resources, and systems from exploitation, tampering, corruption, accidental, or malicious activities.
T-67	The proposed solution must provide or support the use of prevention mechanisms that protect processes, data, resources, and systems.
T-68	The proposed solution must provide or support the use of detection capability mechanisms that protect processes, data, resources, and systems.
T-69	The proposed solution must provide or support self recovery mechanisms in the event of failure that protects processes, data, resources, and systems such that all systems recover to a secured state.
T-70	The proposed solution must provide or support mechanisms that ensure the availability of all processes, data, resources, and systems associated with the proposed solution.
T-71	The proposed solution must provide or support regularly scheduled and/or critical upgrades, and software patches.
T-72	The proposed solution must provide or support periodic backup of critical information assets, and enable the recovery of those assets back to a secured operational state.
T-73	The proposed solution must provide or support mechanisms that ensure the constant protection of processes, data, resources, and systems from unauthorized modification and maintain consistency.
T-74	The proposed solution must provide or support mechanisms that protect data from unauthorized access or manipulation.

Req. #	Technical Security Requirements
T-75	The proposed solution must provide or support mechanisms that ensure systems can perform their intended functions in an unimpaired manner, free from deliberate or inadvertent unauthorized manipulation.
T-76	The proposed solution must provide or support mechanisms that ensure the authenticity of all processes, data, resources, and systems.
T-77	The proposed solution must provide or support control mechanisms that ensure the accuracy of processes, data, resources, and systems.
T-78	The proposed solution must provide or support mechanisms that provide backup and recovery of processes, data, resources, and systems.
T-79	The proposed solution must provide or support encryption mechanisms that ensure the constant protection of information assets while in transit or storage.
T-80	The proposed solution must provide or support mechanisms that ensure that information assets used by or in processes, resources, and systems are fully protected and maintained.
T-81	The proposed solution must implement mechanisms that maintain a consistent level of protections for processes, data, and resources for the systems proposed.
T-82	The proposed solution must implement mechanisms that maintain a consistent level of security during processes and activities that represent changes to processes, data, and resources for the systems proposed.
T-83	The proposed solution must implement mechanisms that document and control version and defect management, code collection and access controls, and track essential configuration management elements to maintain a consistent level of protections for processes, data, and resources for the systems proposed.
T-84	The proposed solution must implement mechanisms that maintain a consistent level of security during processes and activities associated with access to processes, data, and resources for the systems proposed.
T-85	The proposed solution must implement mechanisms that maintain a consistent level of security during processes and activities associated with the transfer of information assets within, and external to, the organization.
T-86	The proposed solution must implement mechanisms that provide a consistent level of security in the event of system failure that assures recovery of processes, data, and resources for the systems proposed.
T-87	The proposed solution must implement audit and accountability control functions.
T-88	The proposed solution must implement mechanisms that enable security event logging, collection, storage, and monitoring.
T-89	The proposed solution must implement mechanisms that enable system usage reviews, which include logging, collection, storage, and monitoring.

Req.#	Technical Security Requirements
T-90	The proposed solution must implement the information collection and reporting processes for detection, analysis, and response to security incidents and events.
T-91	The proposed solution must implement mechanisms to protect security data from unauthorized access, modification and/or deletion.
T-92	The proposed solution must implement secure storage of audit logs, collect machine state and system usage information, and all items required for forensic investigations.
T-93	The proposed solution must implement mechanisms to administer system entity accounts.
T-94	The proposed solution must provide a security plan that identifies the security services which ensure consistent and continued security of all devices, systems, network software, and operating systems used by, and interfacing with, the proposed solution.
T-95	Technical Requirement T-95 has been removed.
T-96	The proposed solution must provide a plan that details activities for emergency response, backup operations, and disaster recovery to ensure availability of critical system resources and facilitate the continuity of business operations.
T-97	The proposed solution must provide a plan that describes the security services necessary to ensure consistent and continued security of the telecommunications components interfacing with the proposed solution.
T-98	The proposed solution must implement or support controls that are commensurate with the processes, data, resources, and systems that are being protected.
T-99	The proposed solution must implement access controls, based on the principles of need to know, least privilege, separation of duties, and accountability.
T-100	The proposed solution must implement all special-privilege accounts by establishing separate roles and capabilities that are commensurate with the business or technical needs of the role.
T-101	The proposed solution must provide the ability to store multiple logon identities to a single person.
T-102	The proposed solution must provide the ability to disseminate administration of security access rights to external agencies.
T-103	The proposed solution must be component-based and flexible in terms of the ability to add capacity with minimal or no system downtime and reduce the impact to both users and CalPERS. Resource capacities include CPU, Memory, Disk storage, and I/O throughput.



## 3. <u>Technical Requirements - Platform</u>

**PSR Project** 

The Technical Platform Requirements represent the base IT infrastructure of processors, storage systems, and networking components coupled with their associated operating systems.

Req.#	Technical Platform Requirements
T-104	The proposed solution must provide capacity for 400 concurrent CalPERS business users.
T-105	The proposed solution must provide capacity for 200 concurrent employer and member users during normal hours of operation.
T-106	The proposed solution must provide a cost-effective growth capacity of at least 30 percent (30%) in users over a 5-year period without degradation in performance and response time.
T-107	The proposed solution must provide access to external users.
T-108	The proposed solution must be available 24 hours a day, 7 days a week with the exception of agreed upon maintenance windows.
T-109	The proposed solution must be operational 99.5 percent (99.5%) of the time during scheduled uptime hours measured over a period of one week.
T-110	The proposed solution must be available for use during system software releases and modifications.
T-111	The proposed solution must be fully operational, after a disaster has been declared, within the timeframe detailed in the CalPERS Disaster Recovery Plan. Due to the confidential nature of information contained within these documents, if the vendor wishes to view these plan documents, arrangements must be made through CalPERS Project Management.
T-112	All network communications shall be based on the TCP/IP protocol.
T-113	All hardware and business application software proposed must have been installed and in productive use, in substantially the same configuration as the proposal, for a paying customer external to the QBP's organization, for at least six (6) months prior to the Final Proposal submission.

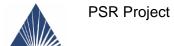


#### 4. <u>Technical Requirements - Data</u>

**PSR Project** 

Technical Data Requirements are used to describe the process of managing data across the enterprise with the objective of simplifying access to data, establishing and enforcing database design and technology standards, reducing data redundancy, and securing data.

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Req. #	Technical Data Requirements
T-114	The proposed solution must apply business rules to information prior to saving transactions and records.
T-115	The proposed solution must enforce referential integrity within the application system.
T-116	The proposed solution must provide the ability to capture and analyze point-in-time data snapshots.
T-117	The proposed solution must provide the ability to maintain all solution data within the proposed solution itself.
T-118	The proposed solution must provide the ability to replicate subsets of production data to include in another database.
T-119	The proposed solution must provide the ability to de-identify or obfuscate production data copied to other environments.
T-120	The proposed solution must be able to validate data against external sources.
T-121	The proposed solution must be robust enough to handle data that has become corrupted without a total system crash.
T-122	The proposed solution must provide the ability to allow for partial database recoveries.
T-123	The proposed solution must use Oracle 10g (or current release) as the data storage repository.
T-124	The proposed solution must fully define and describe all system data elements in a Data Dictionary.
T-125	The proposed solution must recover to the last committed transaction in case of failure.
T-126	The proposed solution must automatically restore a record to its original state if a "logical" transaction fails.
T-127	The proposed solution database must recover to a specified point-in-time in case of failure.
T-128	The proposed solution must conform to or exceed the capabilities of existing CalPERS databases.
T-129	The proposed solution must support the federation of separate deployed instances into a composite database.
T-125 T-126 T-127 T-128	The proposed solution must fully define and describe all system data elements in a Data Dictionary.  The proposed solution must recover to the last committed transaction in case of failure.  The proposed solution must automatically restore a record to its original state if a "logical" transaction fails.  The proposed solution database must recover to a specified point-in-time in case of failure.  The proposed solution must conform to or exceed the capabilities of existing CalPERS databases.  The proposed solution must support the federation of separate deployed instance.



Req.#	Technical Data Requirements						
T-130	The proposed solution must support replication of data across federated instances.						
T-131	The proposed solution must maintain transactional integrity across federated instances.						
T-132	The proposed solution's security database must be able to delegate to another database for authentication.						
T-133	The proposed solution must make use of standard security related technology such as Public Key Infrastructure (PKI), Lightweight Directory Access Protocol (LDAP), X.509 Certificates.						
T-134	The proposed solution database must include multiple failover and fault tolerance configurations independent of that provided by underlying hardware and operating systems.						
T-135	The proposed solution database must take advantage of any hardware or operating system specific high availability provisions.						
T-136	The proposed solution database must not experience data loss from server failure.						
T-137	The proposed solution must restrict all data loss from client failure to the current uncommitted transaction.						
T-138	The proposed solution database must be able to be configured exclusively through the selection of parameter settings.						
T-139	The proposed solution database must utilize standard network protocols such as TCP/IP.						
T-140	The proposed solution must not allow ad hoc queries against the Online Transaction Processing (OLTP) database.						
T-141	The QBP shall ensure that data used for testing will be subjected to the same security controls and requirements as production data.						



#### H. TECHNICAL PROPOSAL ITEMS

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The purpose of this section is to present the technical proposal items that are to be addressed by the proposed solution. The responses to the technical proposal items provide an opportunity for the QBP to describe the technical details of the proposed solution.

Responses to Technical Proposal Items describe the proposed solution based on application services, hardware, database services, reporting, network, security, system build, communication services, configuration management, system management and web services and are listed below in Section V.H.1. The QBP is required to respond in two parts to each of the Technical Proposal Items found in Attachment V.11:

- Describe how the proposed solution satisfies the stated Proposal Item; and,
- Put a check mark next to each of the CalPERS architectural principles that your proposed solution satisfies for this Proposal Item.

A variety of reference materials are available to the QBP including the following:

- <u>Exhibit IV.1 CalPERS Conceptual Target Architecture Vision</u> This exhibit represents conceptual Enterprise Technology Architecture (ETA) which defines the overall form and function of the Information Technology (IT) systems across an enterprise.
- <u>Exhibit IV.2 CalPERS Target Architecture Principles</u> This exhibit provides a
  framework of principles, recommended practices, guidelines, policies, standards,
  and products, which direct the design, analysis, construction, deployment and
  management of IT and systems across the enterprise.
- <u>PSR Reference Library</u> The reference library contains the details for the current existing pension system at CalPERS.

#### 1. **Proposal Items - Application**

The Application Proposal Items are used to describe structures on which applications are developed and interact with new and existing systems.

<u>Proposal Item 43</u> Describe the proposed solution's application architecture and how it addresses future changes in technology.

<u>Proposal Item 44</u> Describe how the proposed solution will perform several actions such as:

- (i) End-user multi-tasking;
- (ii) Handle multiple data intensive applications; and,

(iii) View multiple analyses or processes simultaneously in the same work area.

#### Proposal Item 45

Describe how the proposed solution addresses the problem of complex processes that requires the participation of multiple databases and character sets. Include details on how the proposed solution uses the ability to array and track historical updates to data elements.

Proposal Item 46

Describe how the proposed solution's software will address data imported into the system and the requirement that it be subject to the same system edits as the online systems for any time period.

#### 2. **Proposal Item - Hardware**

The Hardware Proposal Item is used to describe the infrastructure environments and platforms being proposed.

Proposal Item 47

Describe the proposed solution's hardware and environments including platform configurations required for a system of this size and complexity.

#### 3. <u>Proposal Items – Database Services</u>

The Database Services Proposal Items are used to describe the management of data across the enterprise with the objective of simplifying access to data, establishing and enforcing database design and technology standards, reducing data redundancy, and securing data.

Proposal Item 48 Describe the proposed solution's database components.

Proposal Item 49

As a common data store solution is required to minimize data redundancy, describe the Online Analytical Processing (OLAP) and data warehousing products being considered. Describe the architecture and licensing for each product identified.

Proposal Item 50

Describe the proposed solution's data dictionary or meta data repository that is separate from the database system catalog that can be used as an enterprise-wide universal data definition source.

Proposal Item 51

Describe how the proposed solution will coordinate commit and rollback transactions, either on a single instance or on multiple instances.

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#### Proposal Item 52

Describe how the proposed solution will synchronize and replicate data to local and remote locations for purposes that could include report generation, disaster recovery, and federated data management.

#### Proposal Item 53

Describe the proposed solution's tools available for supporting the automatic backup and restoration of files, databases, and repositories in the proposed solution environments.

#### Proposal Item 54

Describe the proposed solution's functionality for archiving and retrieving data. Include the process and tools for archiving, tracking, and reporting archived media.

#### Proposal Item 55

Describe how the proposed solution provides logical and physical data modeling capabilities, including graphically depicting data on an Entity-Relationship Diagram, reporting capabilities of entities, and attributes.

#### 4. **Proposal Items – Reporting Services**

The Reporting Services Proposal Items are used to describe the proposed electronic document management and reporting solutions.

#### Proposal Item 56

Describe the proposed solution's reporting abilities, addressing the following key points:

- Processing of reports or ad hoc query activity, given the requirement that these are not processed against OLTP databases;
- Physical distribution of report pages (e.g., multiple reporting sites, local printing, electronic bursting, and faxing);
- Report distribution via system alerts:
- Report scheduling;
- Online report viewing;
- Reporting for multiple versions of the same report to comply with retention regulations;
- Provide a list of the page sizes and layouts supported;
- Support of customized reports;

•	Support various report formatting and styles (grid, tak	),
	cross tab, and graph styles); and,	

- Depict nested data windows for multiple levels of drill down (reports within a report).
- <u>Proposal Item 57</u> Describe the proposed solution's approach to document management.
- Proposal Item 58 Describe how the proposed solution manages and publishes documents so that document history of revisions and publication can be traced.
- <u>Proposal Item 59</u> Describe how the proposed solution limits document access to those authorized to view the information.

#### 5. Proposal Items – Web Services

The Web Services Proposal Items are used to describe how the proposed solution presents and manages information using web services.

<u>Proposal Item 60</u> Describe how the proposed solution will be deployed in private Intranet and public Internet environments.

Proposal Item 61 Describe the features of the proposed solution that support a browser-based user interface and those that do not.

<u>Proposal Item 62</u> Describe how the proposed solution supports automatic upgrades to new versions.

<u>Proposal Item 63</u> Define the proposed solution's minimum end-user hardware and software requirements.

Proposal Item 64

Describe how the proposed solution leverages portal technology. Include a description of the types of portlets your proposed solution will use, the portal application server being proposed and the standard which will be adhered to.

#### 6. Proposal Items - Network

The Network Proposal Items are used to describe how the proposed solution's application and tools will interact with the network.

Proposal Item 65 Describe how the proposed solution conforms with network architecture standards and is capable of scaling and upgrading.

	Proposal Item 66	Describe	how	the	proposed	solution	will	deploy	client
software for both base build and future releases.						es.			

Proposal Item 67 Describe how the proposed solution mediates traffic

between a protected network and the Internet.

Proposal Item 68 Describe how the proposed solution establishes,

maintains, and terminates connections across a

communication network.

#### 7. **Proposal Items - Security**

The Security Proposal Items are used to describe the proposed solution's security services and functionality.

Proposal Item 69 Describe in detail the proposed solution's Security Plan.

Proposal Item 70 Describe the proposed solution's security functionality and

how it integrates to CalPERS strategic direction for

directory services.

Proposal Item 71 Describe how the proposed solution conforms to Secure

Sockets Layer and IPsec protocols.

Proposal Item 72 Describe how the proposed solution uses encryption and

authentication technologies.

#### 8. Proposal Items - System

The System Proposal Items are used to describe the proposed solution's overall system integration attributes.

<u>Proposal Item 73</u> Describe how the proposed solution processes the

changing of business rules.

Proposal Item 74 Describe how the proposed solution provides a common

repository for development objects, design documents,

source code, test plans, and data.

Proposal Item 75 Describe how the proposed solution publishes documents,

including online, application development, and content-

related documentation.

Proposal Item 76 Describe the proposed solution's testing tools. These

should allow for the creation, load and maintenance of test data, manipulation of test dates, creation of test scripts,

and tracking of test activities.

Proposal Item 77	Describe how the proposed solution generates forms and reports at runtime.
Proposal Item 78	Describe how the proposed solution generates DDL scripts to new or altered database objects.
Proposal Item 79	Describe the proposed solution's method for communication within the application, between modules and across systems.
Proposal Item 80	Describe the proposed solution's APIs exposed to external applications and the technologies supported such as DCOM, J2EE, Common Object Request Broker Architecture (CORBA), etc. Provide a list of the APIs currently available.
Proposal Item 81	Describe the proposed solution's internal version control hooks, check-in and check-out capabilities, and how this plugs into external controls to allow team development.
Proposal Item 82	Describe how the proposed solution publishes information to applications that have subscribed to be notified of an event such as employee termination.
Proposal Item 83	Describe the proposed solution's developers toolset and how it performs tool-to-tool communications, integrating the development environments.
Proposal Item 84	CalPERS has designated a strategic product (SeeBeyond) for messaging middleware. If the QBP proposed solution does not utilize the CalPERS designated product, describe how the proposed solution's messaging middleware provides any advantages to CalPERS in terms of administration, business processing, technology, or Total Cost of Ownership (TCO).
Proposal Item 85	CalPERS has designated a strategic product (FileNet) for document imaging, handling, and workflow processing. If the QBP proposed solution does not utilize the CalPERS designated product, describe how the proposed solution's document imaging, handling, and workflow processing provides any advantages to CalPERS in terms of

#### 9. <u>Proposal Items – Communication Services</u>

The Communication Services Proposal Items are used to describe the proposed solution's communications and messaging capabilities.

administration, business processing, technology, or TCO.

Proposal Item 86	Describe	how	the	proposed	solution	interacts	with
	LDAP/SS	O com	patib	le directory	/ services	to provide	data
	propagation	on, ce	ntraliz	ed login,	authorizatio	on, and ac	cess
	control.						

# Proposal Item 87 Describe how the the proposed solution uses inbound and outbound asynchronous interfaces, through message-oriented middleware.

# Proposal Item 88 Describe how the proposed solution sends and receives asynchronous communications. Include examples of inbound and outbound messaging in relation to e-mail, EDI, HTML, and XML.

# Proposal Item 89 Describe how the proposed solution integrates with legacy systems and how the proposed solution transfers data from existing systems into the new solution.

## Proposal Item 90 Describe how the proposed solution applies the same edits and validation rules to batch and interface transactions as it would to online transactions.

# Proposal Item 91 Describe the proposed solution's current and future approaches (plans, schedules, etc.) to using XML and SOAP in the development of the application software and in supporting those interface and interchange standards.

#### 10. Proposal Items – Release Management

The Release Management Proposal Items are used to describe how the proposed solution provides configuration management and release management for software items.

<u>Proposal Item 92</u> Describe the proposed solution's approach to release management. Include descriptions of the following:

- Capability to control multiple versions of source components and data as they are moved from the development environment through to the production environment;
- Promotion mechanism to move components from one environment to another;
- Mechanism for reverting to a previous release;
- Audit trails per release;
- Reporting on releases;

- Change management support capabilities such as conversion tools that catalog changes and perform automatic data conversions and reapply program modifications to the new release. Include a description of the type of changes that cannot be applied automatically; and,
- Upgrade utilities such as tools that support identification of net differences between releases listing areas that need specific attention.

Proposal Item 93 Describe the proposed solution's approach to product life cycle management.

Proposal Item 94 Describe the proposed solution's dependencies on other software within the proposed configuration.

Proposal Item 95 Describe how the proposed solution validates software versions to ensure proper operation and functionality in the product environment.

Proposal Item 96 Describe how the proposed solution ensures functionality by monitoring, identifying, and validating the environment integrity prior to and during program execution.

Proposal Item 97 Describe the proposed solution's tools for enabling automated distribution of data and software to the workstations and servers.

#### 11. **Proposal Items – System Management**

The System Management Proposal Items are used to describe how the proposed solution manages and monitors the application and infrastructure.

Proposal Item 98 Describe the proposed solution's monitoring capabilities. Include details on what is monitored, alert thresholds, and the notification process. Describe the software's integration with monitoring tools. Also describe how the proposed solution can view user sessions and assist with

processing a transaction or a report request.

Proposal Item 99 Describe how the proposed solution provides performance analysis. Include all available metrics, such as tracking of

CPU utilization, response time, disk space, system warnings, and errors. Describe how this can be related to

application and database performance.

Proposal Item 100 Describe the proposed solution's error alert, tracking, and notification interface for the different levels and states of

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exception processing. Include details on any diagnostic assistance and audit trails of specified actions that are available to system support personnel.

#### Proposal Item 101

Describe how the proposed solution coordinates transactions either on a single machine or on multiple machines within the network (i.e., approach to load balancing, failover, and commit logic). Describe how the proposed solution backs out transactions.

#### Proposal Item 102

Describe the proposed solution's 'High-Availability' system architecture including resiliency, redundancy, and manageability.

#### Proposal Item 103

Describe the proposed solution's fault tolerance and disaster recovery approach, detailing the levels of recovery from a single update failure to total system failure. Describe any single points of failure and what reasons the application (or parts of the application) must be brought down. Also, include a description of how this affects availability and reliability and include a description of technical support services available.

#### Proposal Item 104

Describe your proposed solution's start-up and shutdown procedures.

#### Proposal Item 105

Describe how the proposed solution makes configuration changes without requiring a reboot or restart.

#### Proposal Item 106

Describe how the proposed solution performs mass storage management, backup, and recovery functions.

#### Proposal Item 107

Describe the proposed solution's approach to, and model for, sizing the server platform(s), network (required bandwidth), and database. Include a list of all assumptions that are inherent to the sizing model. Also describe how this approach supports benchmarking and future scalability.

#### Proposal Item 108

Describe the proposed solution's control structure and framework for batch processes. Include automatic recovery and restart, run-to-run balances, batch totals, and any scheduling capabilities delivered with the proposed solution.

#### Proposal Item 109

Describe the proposed solution's strategies and tools available for capacity modeling and planning.

Proposal Item 110

Describe the proposed solution's abilities for tracking users and software usage or metering to help manage software licensing.

Proposal Item 111

Describe how the proposed solution interfaces with the current help desk services software.

#### 12. Proposal Items - Benchmarking

The Benchmarking Proposal Items are used to describe the QBP's configuration and performance characteristics for similar systems which the QBP has implemented previously.

#### Proposal Item 112

QBPs must provide a certified application benchmark of a configuration similar to the proposed solution's configuration. Include the following information for all tiers where applicable:

- Hardware vendor;
- Operating system;
- RDBMS;
- Total disk space;
- System components and release version;
- Test script;
- Number of tested benchmark users;
- Throughput online transactions per hour;
- Throughput batch updates per hour;
- Average DB response time;
- Average dialog response time;
- CPU utilization;
- WAN Performance; and,
- Batch Performance.